The oesophagus is that part of alimentary tract which connects the pharynx to the stomach and therefore has:
- A Cervical portion
- An intra thoracic portion
- A short abdominal portion

Muscular tube 25 cm long. Extend from lower border of cricoid (6th cervical vertebra to 11 thoracic vertebra).

Constrictions:
- 15 cm ______ commencement
- 25 cm ______ Aortic arch and left main bronchus
- 40 cm ______ Pierce the diaphragm

Histology of Oesophagus
- Coats:
  - Mucous
  - Sub mucous
  - Muscular
  - Fibrous.

Symptomatology

Dysphagia:
- Due to pain
- Neuromuscular Dysfunction
- Mechanical obstruction

- **Regurgitation:**
  - Water brash

- **Pain:**
  - Epigastrium, substernal region
  - Left sub scapular region of the back
  - Root of neck

## Symptomatology

- **Bleeding:**
- **Respiratory symptoms:**
- **General symptoms**
  - Loss of weight
  - Malaise, tiredness.

## Oesophageal Trauma

- **Aetiology:**
  - Burns, scalds, corrosive injuries
  - Instrumentation
  - Foreign bodies
  - Injuries to neck

- **Pathology**
  - Minor trauma ______ localized oesophagitis
  - Moderate ______ Necrosis
  - Severe _______ Perforation.

## Oesophageal Trauma

- **Clinical features**
  Depending upon the nature & severity of trauma.
  - Pain
  - Dysphagia
• Shock
• Dyspnoea

• Diagonosis
  — Plain Radiograph —— oesophageal trauma.
  — Barium Swallow —— after 3 to 4 days
  — Endoscopic examination.

Oesophageal Trauma

• Treatment
  — Treat the shock
  — Systemic antibiotics
  — Steroid therapy
  — Dilute alkaline fluids
  — N/G tube
  — I/V fluids
  — Gastrostomy
  — Cervical oesophagectomy
  — Immediate repair of tear or rupture

Oesophageal Trauma

• Complication
  — Immediate
    1. Para-oesophageal abscess
    2. Infection of the mediastinum & pleural cavities
    3. Tracheal oesophageal fistula

  — Late
1. stricture

Foreign Bodies in Oesophagus

- The impaction of F.B. Depends upon a size and shape.
- **Thoracic inlet** is the commonest side of impaction, just below the crico pharyngeal sphincter.
- **The cardia** Retrosternal few objects are held up at the cardia.

Clinical Features

- **Pain** Retrosternal
- **Dyphagia** It may be impossible to swallow even saliva.

FOREIGN BODY (COIN)

Foreign Bodies in Oesophagus

Clinical Features (Cont---)

- **Regurgitation of food**
- **Excessive Salivation** Collects in pyriform fossa
- **Dyspnoea & Hoarseness** If foreign body is impacted high up near the Crico pharyngeal sphincter.
- **Localized tenderness** and loss of laryngeal crepitus due to mucosal
oedema.

- **Localized swelling** supra clavicular region more commonly on left side, when para-oesophageal abscess is formed.

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**Foreign Bodies in Oesophagus**

- **Diagnosis F.B.**
  - Radiography
  - Pain x-ray
  
  
  A/P                LAT
  OBLIQUE
  
  - Opaque flat objects of coin shown lying in coronal plane.
  - Fish bones may be translucent Non-opaque F.B. localized with a very small amount of barium swallow.
  - Endoscopic examination.

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**Foreign Bodies in Oesophagus**

- **Treatments**
  - Endoscopic removal
  - External cervical
  - Transthoracic oesophagotomy

- **Complication**
  - Cellulites or abscess in neck
  - Mediastinal emphysema
  - **Mediastinitis**
  - **Pneumo thorax**
  - Oedema of larynx
  - **Tracheal compression**
  - Septicemia
• Perforation of aorta
• Stricture
• T.E. fistula

**Zenker's diverticulum**

- Blind sac (pouch) that branches off the cervical esophagus
- Occurs in elderly populations
- Precise etiology is uncertain
- Incoordination of the the cricopharyngeus muscle
- Killian's dehiscence

**SYMPTOMS OF ZENKER’S DIVERTICULUM**

- Dysphagia
- Regurgitation of undigested food hours after eating
- Feeling of food sticking in the throat
- Coughing after eating
- Aspiration of food and liquid into the airways
- Unexplained weight loss
- Bad breath
- Gurgling noises in the neck

**Treatment**

Small diverticula (smaller than 2 cm) may require

- presence of dysphagia, aspiration, or other significant symptoms may necessitate surgery.

Surgical options
• Cricopharyngeal (CP) myotomy
• Diverticulectomy
• Endoscopic Surgery for Zenker’s Diverticulum

**Oesophageal Stricture**

- **Aetiology**
  - Congenital  Rare, usually single mostly lower third
  - Traumatic
    - Corrosive, multiple foreign bodies or instrumentation cause ulceration, which leads to stricture formation.
  - Inflammatory
    » Followed by ulceration of reflux oesophagitis or hiatus hernia.

- **Clinical Features**
  1. Dysphagia  for solid initially than for fluids also
  2. Regurgitation of food
  3. Loss of Weight
• **Diagnosis**

  » X-ray Barium swallow
  » Confirmed by oesophagoscopy

• **Management**

  » Dilatation

  1. Gum elastic bougies
  2. Hydrostatic
  3. nasogastric tube insertion through the stricture

**OESOPHAGEAL STRicture**

**BOUGIES**
OESOPHAGOSCOPE

BARIUM SWALLOW (STRUCTURES)

OESOGHAGEAL DILATATION

CA-OESOPHAGUS

• Cause / Related Factors
  — Cigarette & Tobacco Chewing
  — Alcohol abuse
  — Reflex oesophagitis, hiatus hernia
- Cricoid carcinoma
- Opium & hot fluid intake
- Malnutrition vit A,B,C deficiency
- Achalasia cardia, scleroderma

• Pathology
  - SCC is commonest
  - Adeno carcinoma in lower oesophagus
  - Rarely carcinosarcoma may occur

CA-OESOPHAGUS

• Clinical Features
  - Early features
    • Retrosternal discomfort
    • **Dysphagia (first to solid & then liquid)**
    • Impaction of food (suddenly)
  - Late features
    • Pain
    • Hemoptysis
    • Aspiration (coughing / chocking / cyanosis)
    • Weight loss (anaemia)
    • Infection (pneumonia / mediastinitis / oral ulceration).
Ca-Oesophagus

- Tumor spread
  - Local
  - Lymphatics
  - Hematogenous (liver / lung / brain/ bones)

- Investigations
  - CXR – PA / lateral View
  - Barium swallow – irregular filling defect or mouse nibbled appearance
  - Endoscopy
  - CT-Scan
  - U/S (metastasis in liver)

- Pre-operative assessment
  - For adjacent & distant metastasis
  - Nutritional status
  - Cardio respiratory status

- Ca-upper oesophagus
  - Rarely meets pre-operative criteria
  - Endoscopic debulking of primary
  - Pharyngo-Laryngo-oesophagectomy with reconstruction
  - Radiotherapy

- Ca-mid oesophagus
  - Total oesophagectomy
  - Stomach pull-up & cervical anastomosis
— Colon transposition through mediastinum
— Endoscopic dilatation & radiotherapy
• Ca lower oesophagus
  — Oesophago-gastrostomy
  — Reconstruction with stomach pull-up
  — Palliative dilatation in advanced lesion
  — Pre & post operative radiotherapy. Ca-Oesophagus
• Palliative management
  — High calorie, protein & vitamin, diet
  — Dilatation with bougies
  — Gastrostomy with feeding jejunostomy
  — By pass / shunt surgery / NG Feeding
  — Palliative debulking via oesophagoscope
  — Palliative recanalization with laser --- CO₂ / NDyAG
  — Palliative or radical external beam radiotherapy
  — Palliative chemotherapy & pain relief.